

Notice of Allowability

Application No.

09/660,187

Examiner

Jin-Cheng Wang

Applicant(s)

ITO, MASA AKI

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/25/2004 and 4/26/2005.
2. ☒ The allowed claim(s) is/are 1 and 6-12.
3. ☒ The drawings filed on 12 September 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Reasons for Allowance

1. The following is an examiner's statement of reasons for allowance of claims 1, 6-10 and 12 in the amendment of 10/25/2004: Nothing in the prior art anticipates or suggests, "*pre-reading means for pre-reading said background data from said storage means by establishing an area for pre-reading which includes: setting a predetermined angle-of-visibility based on a direction of the moving object, setting a limit-line of a visual field at a predetermined distance towards a front of the visual field, and setting a pre-reading start line at a predetermined distance beyond a front of the limit-line of the visual field that moves in the direction of the moving object when viewed from the moving object*" and "*said game device further comprising counting means for detecting whether said moving object exists within said areas corresponding to memory blocks storing background data, or an area that exists within the visual field, in said work memory, and counting said moving object or visual field area periodically, wherein said reading means includes means for determining the memory block to store said background data based on a count value determined for each of said memory blocks by said counting means when it is judged that there is no vacant space in said work memory*" in a game device that reads from a storage means, prior to image processing, background data required in games for displaying a moving object within a virtual three-dimensional space together with a background, comprising: pre-reading means for pre-reading said background data from said storage means by establishing an area for pre-reading which includes: setting a predetermined angle-of-visibility based on a direction of the moving object, setting a limit-line of a visual field at a predetermined distance towards a front of the visual field, and setting a pre-reading start line at a predetermined distance beyond a front of the limit-line of the visual field that moves in the direction of the moving

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object when viewed from the moving object, wherein said storage means stores said background data by dividing said background data into a plurality of areas in advance; said pre-reading means comprising judging means for judging which of said areas said pre-reading start line is crossing to determine a specific area from among the plurality of areas, and reading means for reading the background data of the area judged as being crossed with said pre-reading start line by the judging means, wherein said plurality of areas are respectively stored in said storage means by dividing the content of background data per type; said game device further comprising a work memory including a plurality of memory blocks each set at a same memory capacity, wherein said reading means includes means for storing the background data of the crossed area in an integral number “n” of said memory blocks in said work memory in accordance with the amount of the background data to be stored, and wherein said reading means includes means for judging whether one or more of said memory blocks of said work memory are a vacant space or not, and means for successively storing the background data of said crossed area in said integral number “n” of said memory blocks when said integral number of said memory blocks are judged as vacant space and of sufficient capacity to store the background data; said game device further comprising counting means for detecting whether said moving object exists within said areas corresponding to memory blocks storing background data, or an area that exists within the visual field, in said work memory, and counting said moving object or visual field area periodically, wherein said reading means includes means for determining the memory block to store said background data based on a count value determined for each of said memory blocks by said counting means when it is judged that there is no vacant space in said work memory set forth in the independent claim 1.

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2. The following is an examiner's statement of reasons for allowance of claim 11 in the amendment of 10/25/2004: Nothing in the prior art anticipates or suggests, *"reading background data required for a game that displays a moving object within virtual three-dimensional space together with a background in working memory from memorizing means prior to image processing, wherein said background data is pre-read from a recording medium by establishing an area for pre-reading which includes: setting a predetermined angle-of-visibility based on a direction of the moving object, setting a limit-line of a visual field at a predetermined distance towards a front of the visual field, and setting a pre-reading start line at a predetermined distance beyond a front of the limit-line of the visual field that moves in the direction of the moving object when viewed from the moving object"* and "detecting whether said moving object exists within any of said plurality of areas corresponding to memory blocks storing background data, or an area that exists within the visual field, in said working memory, and counting said moving object or area periodically; and determining the memory block to store said read background data based on a count value determined for each of said memory blocks by said counting when it is judged that there is no vacant space in said working memroy" in a data processing method for a game device comprising: reading background data required for a game that displays a moving object within virtual three-dimensional space together with a background in working memory from memorizing means prior to image processing, wherein said background data is pre-read from a recording medium by establishing an area for pre-reading which includes: setting a predetermined angle-of-visibility based on a direction of the moving object, setting a limit-line of a visual field at a predetermined distance towards a front of the visual field, and setting a pre-reading start line at a predetermined distance beyond a front of the

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limit-line of the visual field that moves in the direction of the moving object when viewed from the moving object; said recording medium storing said background data by dividing said background data into a plurality of areas in advance, said plurality of areas being respectively stored in said recording medium by dividing the content of background data per type and approximately the same size; judging which of said areas said pre-reading start line is crossing to determine a specific area from among the plurality of areas, and reading the background data of the area judged as being crossed with said pre-reading start line; storing background data of the crossed area in an integral number "n" of memory blocks in said working memory in accordance with an amount of the background data to be stored, said working memory including a plurality of memory blocks each set at a same memory capacity; judging whether one or more memory blocks of said working memory are a vacant space or not, and successively storing the background data of said crossed area in said integral number "n" of said memory blocks judged as vacant space and of sufficient capacity to store the background data; detecting whether said moving object exists within any of said plurality of areas corresponding to memory blocks storing background data, or an area that exists within the visual field, in said working memory, and counting said moving object or area periodically; and determining the memory block to store said read background data based on a count value determined for each of said memory blocks by said counting when it is judged that there is no vacant space in said working memory set forth in the independent claim 11.

The cited reference Yamamoto et al. U.S. Patent No. 5,755,620 failed to disclose the claim limitation of "pre-reading means for pre-reading said background data from said storage

means by establishing an area for pre-reading which includes: setting a predetermined angle-of-visibility based on a direction of the moving object, setting a limit-line of a visual field at a predetermined distance towards a front of the visual field, and setting a pre-reading start line at a predetermined distance beyond a front of the limit-line of the visual field that moves in the direction of the moving object when viewed from the moving object” and “said game device further comprising counting means for detecting whether said moving object exists within said areas corresponding to memory blocks storing background data, or an area that exists within the visual field, in said work memory, and counting said moving object or visual field area periodically, wherein said reading means includes means for determining the memory block to store said background data based on a count value determined for each of said memory blocks by said counting means when it is judged that there is no vacant space in said work memory” set forth in the independent claim 1 and similarly in the independent claim 11.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcw



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